ACC.15
TCT@ACC-i2 | innovation in intervention

A1603
JACC March 17, 2015
Volume 65, Issue 10S

Stable Ischemic Heart Disease

THE INCIDENCE AND RISK FACTORS OF LATE CATCH UP PHENOMENON AFTER SECOND GENERATION DES DEPLOYMENT

Poster Contributions
Poster Hall B1
Saturday, March 14, 2015, 10:00 a.m.-10:45 a.m.

Session Title: Risk Markers, CAD, Prognosis
Abstract Category: 26. Stable Ischemic Heart Disease: Clinical
Presentation Number: 1123-370

Authors: *Takahiro Tokuda, Toshiya Muramatsu, Reiko Tsukahara, Yoshiaki Ito, Hiroshi Ishimori, Keisuke Hirano, Masatsugu Nakano, Masahiro Yamawaki, Motoharu Araki, Norihiro Kobayashi, Hideyuki Takimura, Yasunari Sakamoto, Masakazu Tsutsumi, Takuro Takama, Hiroya Takafuji, Saiseikai Yokohama City Eastern Hospital, Yokohama, Japan*

Background: The previous studies showed clinical restenosis within 1 year after PCI had been remarkably reduced with the appearance of second generation drug-eluting stents (DES). However, the late catch up (LCU) phenomenon remains one of the issues even in the DES era. The aim of this study is to investigate the clinical outcomes of LCU after second generation DES deployment.

Methods: We performed PCI for de novo 2456 lesions in 1955 patients that were treated with second generation DES (zotarolimus-eluting stent: ZES, everolimus-eluting stent: EES, and biolimus-eluting stent: BES) in a single center from April 2009 to December 2012. Of that, 1752 lesions (71.3%) were clinically followed up more than 1year and performed 6-12 month follow up angiography. We divided into LCU group and non-LCU group and assessed the incidence, outcomes, and predictive factors of the LCU phenomenon, defined as secondary revascularization 1 year after index stenting.

Results: The mean clinical follow up period was 745±265 days. Of all lesions, the LCU was found in the 98 lesions (3.9%). There were no significant differences in terms of patient background and lesion characteristics except HD, DM, and calcified lesion. (HD: 15.2% vs 3.5%; p<0.0001 DM: 57.6% vs 41.3%; p=0.002 calcified lesion: 24.5% vs 16.3%; p=0.04) Moreover, hinge motion, stent fracture (SF), and tortuosity were higher in the LCU group. (hinge motion :9.9% vs 2.9%; p=0.01, SF:8.8% vs 1.2%; p=0.0003, tortuosity:8.5% vs 1.7%; p=0.004) QCA analysis showed there was significant decrease in minimal lumen diameter (MLD) at follow up in the LCU group. (LCU group:1.76±0.71 mm vs non-LCU group:2.30±0.56 mm; p<0.0001) After multivariate analysis, HD (OR: 5.19 95%CI:2.05-12.5, p=0.0008), SF (OR: 5.20 95%CI:1.06-23.6, p=0.04), tortuosity (OR: 4.29 95%CI:1.23-13.1, p=0.02) , and MLD (OR: 2.39 95%CI:1.33-4.47, p=0.003) are the independent predictors of LCU.

Conclusion: The LCU phenomenon after second generation DES deployment occurs in 3.9% and the predictive factors are HD, SF, tortuosity, and MLD.